

Title (en)

Tamper-evident buttress plug closure.

Title (de)

Originalitätsverschluss in Form eines mit einem Flansch versehenen Stopfens.

Title (fr)

Fermeture inviolable en forme d'un bouchon à collerette de butée.

Publication

EP 0324196 A2 19890719 (EN)

Application

EP 88201659 A 19880801

Priority

US 14251088 A 19880111

Abstract (en)

A tamper-evident buttress plug (20) for sealing closed a plastic 55-gallon drum (22) includes a plug body (24) which is externally threaded and compatible with the internally threaded container outlet, a ratchet ring (23) which includes a circumferentially distributed series of ratchet teeth on its inner surface and a series of four frangible elements (25) which initially integrally join the ratchet ring to the plug body. The container outlet has neck which is configured with two spaced series of ratchet teeth (30) which are of a size and configuration so as to be mutually engageable with the ratchet teeth (26) on the closure ring. As the closure is threadedly advanced into the outlet, threaded engagement is first achieved and then ratchet engagement. When it is time for the closure to be removed from the container, the frangible elements must be severed so as to separate the ring and the plug body. In view of the fact that the 55-gallon plastic drum is blow-molded by split-block technique, it is necessary for the two series of ratchet teeth on the container outlet to be less than 180 DEG in their circumferential extent thus leaving spaces between the series. In order to prevent compression of the ring by squeezing inwardly at the location of these two spaces, semi-circular raised protuberances (40, 41) are provided in order to prevent ovalizing and an ability to disengage the ratchet teeth.

IPC 1-7

B65D 39/08; **B65D 55/02**

IPC 8 full level

B65D 39/08 (2006.01); **B65D 55/02** (2006.01)

CPC (source: EP US)

B65D 39/088 (2013.01 - EP US); **B65D 55/022** (2013.01 - EP US)

Cited by

WO0050311A1; EP3208435A1; FR2708914A1; EP0873943A1; EP0653358A1; WO03051737A3; US8813988B2; US9434518B2; US9790009B2

Designated contracting state (EPC)

AT BE CH DE ES FR GB IT LI LU NL SE

DOCDB simple family (publication)

EP 0324196 A2 19890719; **EP 0324196 A3 19900801**; **EP 0324196 B1 19940105**; AT E99627 T1 19940115; AU 2027088 A 19890713; AU 600846 B2 19900823; BR 8804224 A 19900410; CA 1305100 C 19920714; DE 3886914 D1 19940217; DE 3886914 T2 19940428; JP H01182264 A 19890720; MX 166314 B 19921229; US 4785963 A 19881122; ZA 885848 B 19890426

DOCDB simple family (application)

EP 88201659 A 19880801; AT 88201659 T 19880801; AU 2027088 A 19880801; BR 8804224 A 19880819; CA 576136 A 19880831; DE 3886914 T 19880801; JP 21349288 A 19880827; MX 1284388 A 19880826; US 14251088 A 19880111; ZA 885848 A 19880809